

Amendment and Response

Applicant: Daniel J. Fisher

Serial No.: 10/821,071

Filed: April 8, 2004

Docket No.: M120.253.101 / 59554US002

Title: ATTACHMENT SYSTEM FOR A SANDING TOOL

REMARKS

The following remarks are made in response to the Non-Final Office Action mailed January 12, 2006 ("Office Action"). According to the Office Action, claims 10-13 and 16 stand withdrawn from further consideration pursuant to 37 C.F.R. §1.142(b) as being drawn to a non-elected species; claim 1 stands objected to due to a typographical error; and claim 3 stands objected to under 37 C.F.R. §1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Additionally, claims 1, 3, and 5 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of those claims; claims 1-7, 14, 15, 28-32, 37, and 38 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,201,785 ("Nagano"); and claims 8, 9, 33, and 34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nagano in view of U.S. Patent No. 6,210,389 ("Long").

With this Response, claims 1, 3, 5, and 38 have been amended and newly presented claim 41 has been added. Claims 1-9, 14, 15, 28-34, 37, 38, and 41 are presented for consideration and allowance.

Objections

Claim 1 stands objected to due to a typographical error and claim 3 stands objected to under 37 C.F.R. §1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claim 1 has been amended to correct an unintentional typographical error. As such, the objection to claim 1 is believed overcome. Withdrawal of the objection and notice to that effect are respectfully requested.

Claim 3 stands objected to for "only provid[ing] limitations for the mating surface on the abrasive article, however the claims are directed to the conversion pad only, thus the claim does not further limit the independent claims because it does not provide any further limitations for the conversion pad." Office Action at p. 2, para. 3. Claim 3 has

Amendment and Response

Applicant: Daniel J. Fisher

Serial No.: 10/821,071

Filed: April 8, 2004

Docket No.: M120.253.101 / 59554US002

Title: ATTACHMENT SYSTEM FOR A SANDING TOOL

been amended to include limitations relating to the attachment region of the conversion pad being adapted to form a releasable connection between the first major surface of the abrasive article and the conversion pad that is secure enough to resist relative movement between the abrasive article and the conversion pad when abrading a work surface with the abrasive article. As such, the objection to claim 3 is believed overcome. Withdrawal of the objection and notice to that effect are respectfully requested.

35 U.S.C. §112, Second Paragraph, Rejections

Claims 1, 3, and 5 stand rejected under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter of those claims. In meeting the requirements of 35 U.S.C. §112, Second Paragraph, an “[a]pplicant may use functional language... or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought.” MPEP §2173.01 (emphasis added) (citing *In re Swinehart*, 439 F.2d 210, 160 USPQ 226 (CCPA 1971)). The inquiry goes to whether the claim meets the threshold requirements of clarity and precision, not whether more suitable language or modes of expression are available. MPEP §2173.02. The clarity of the claim language must be evaluated according to the understanding of one having ordinary skill in the art in view of the application disclosure and the prior art. *In re Moore*, 439 F.2d 232, 235, 169 USPQ 236, 238 (CCPA 1971). For at least the following reasons, the claims meet the requirements of 35 U.S.C. § 112, second paragraph.

Claim 1 stands rejected on the grounds that “[c]laim 1 discloses that a non-attachment region forms an attachment that is weaker than the attachment formed by the attachment region. It is unclear how a non-attachment region may form any attachment at all.” With reference to the paragraph beginning on page 12, line 22 (emphasis added), the following is provided:

Amendment and Response

Applicant: Daniel J. Fisher

Serial No.: 10/821,071

Filed: April 8, 2004

Docket No.: M120.253.101 / 59554US002

Title: ATTACHMENT SYSTEM FOR A SANDING TOOL

In one aspect of the invention, the connection formed between the non-attachment region 22 and the associated mating surface 28 is weaker than the connection formed between the attachment region 22 and the associated mating surface 28. That is, the force required to separate the abrasive article 4 from the conversion pad 8 is less in the non-attachment region 22 than in the attachment region 20. To facilitate removal, the abrasive article 4 is preferably not attached to the conversion pad 8 in the non-attachment region, or is only loosely attached, thereby allowing a user to readily separate an edge portion of the abrasive article 4 from the conversion pad 8. The separated edge portion can, in turn, be firmly grasped by the user and serves as a starting point for generating a peel force that separates attachment region 22 from the associated mating surface 28.

Thus, when evaluating claim 1 in light of the specification, including the preceding exemplary excerpt of the specification, sufficient clarity is provided as to the use of the term “non-attachment region,” as well as “how a non-attachment region may form any attachment at all” as used in claim 1 and described in the specification. Thus, one having ordinary skill in the art would clearly understand “non-attachment region” as used in the claims when read according to the standards of 35 U.S.C. §112, second paragraph.

In view of at least the above, the rejection of claim 1 under 35 U.S.C. §112, second paragraph, is believed fully traversed. Withdrawal of the rejection and notice to that effect are respectfully requested.

Claim 3 stands rejected on the grounds that “[i]t is unclear if the applicant is intending to claim the conversion pad alone or the combination of the conversion pad and the abrasive article, claim 3 only provides structure for the abrasive article, but it appears that the claim is directed to the conversion pad only.” Claim 3 has been amended to include limitations relating to the attachment region of the conversion pad being adapted to form a releasable connection between the first major surface of the abrasive article and the conversion pad that is secure enough to resist relative movement between the abrasive article and the conversion pad when abrading a work surface with the abrasive article.

Amendment and Response

Applicant: Daniel J. Fisher

Serial No.: 10/821,071

Filed: April 8, 2004

Docket No.: M120.253.101 / 59554US002

Title: ATTACHMENT SYSTEM FOR A SANDING TOOL

In view of at least the above, the rejection of claim 3 under 35 U.S.C. §112, second paragraph, is believed fully traversed. Withdrawal of the rejection and notice to that effect are respectfully requested.

Claim 5 stands rejected on the grounds that “there is insufficient antecedent basis for the limitation ‘attachment surface.’” Claim 5 has been amended to change the word “surface” to the word “region” as suggested by the Examiner.

In view of at least the above, the rejection of claim 5 under 35 U.S.C. §112, second paragraph, is believed fully traversed. Withdrawal of the rejection and notice to that effect are respectfully requested.

35 U.S.C. §§ 102, 103 Rejections

Claims 1-7, 14, 15, 28-32, 37, and 38 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,201,785 (“Nagano”). Claims 8, 9, 33, and 34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nagano in view of U.S. Patent No. 6,210,389 (“Long”). For at least the following reasons, the cited references fail to teach or suggest the limitations of claims 1-9, 14, 15, 28-34, 37, and 38.

Claim 1 relates, in part, to a conversion pad for attaching an abrasive article to a backup pad of a sanding tool. The conversion pad has an attachment system including a first major surface. The first major surface includes an attachment region with attachment material for attachment with an associated mating surface. The first major surface also includes a non-attachment region along at least a portion of an edge of the first major surface for forming an attachment with the associated mating surface that is weaker than the attachment between the attachment region and the associated mating surface. A user can grasp a portion of the abrasive article adjacent the non-attached region and thereby separate the abrasive article from the first major surface. For at least the following reasons, the cited references fail to teach or suggest such limitations.

Amendment and Response

Applicant: Daniel J. Fisher

Serial No.: 10/821,071

Filed: April 8, 2004

Docket No.: M120.253.101 / 59554US002

Title: ATTACHMENT SYSTEM FOR A SANDING TOOL

For example, the limitations of claim 1 relate to a first major surface of the conversion pad as including an attachment region and a non-attachment region along at least a portion of an edge of the first major surface. With reference to FIGS. 1 and 3 of Nagano, it can be clarified that Nagano fails to teach or suggest a conversion pad having a first major surface including an attachment region and a non-attachment region as required by the limitations of claim 1 as amended. In particular, the Office Action references an annular portion around the edges of the sheet fasteners 14 and 31 as being a non-attachment region of a first major surface of a conversion pad. Although it is not conceded that the sheet fasteners 14 and 31 of Nagano are actually conversion pads, regardless, it can be clarified that the surface of Nagano referenced in the Office Action as lacking fastener material is not part of a major surface of the sheet fasteners 14 or 31.

In particular, one having ordinary skill in the art would, at best, understand the surface identified in the Office Action as being part of the annular portion 18 of the lower surface of the disc holder 10 (or part of the disc holder 30) and not a part of a conversion pad as required by the limitations of claim 1 as amended. In other words, to the extent the hook sheet 14 or 31 of Nagano is interpreted as being the “conversion pad” of claim 1, the hook sheet 14 or 31 terminates as a whole at the perimeter edge shown in FIGS. 1-3; thus, the “first major surface” of the hook sheet 14 or 31 must also terminate or end at this edge. The annular portion 18 of the molded disc holder 10 or 30 is not part of the hook sheet 14 or 31. Thus, the hook sheet 14 or 31 of Nagano fails to teach or suggest all of the limitations of claim 1. As such, it is respectfully requested that the rejections of claims 1-7, 14, and 15 as being anticipated by Nagano be withdrawn.

With respect to the rejections of claims 8 and 9 as being obvious over Nagano in view of Long and to the extent claim 1 might arguably be viewed as obvious over Nagano in view of Long, it is respectfully asserted that Long is non-analogous art. There must be some teaching that the prior art attempts to solve the same or similar

Amendment and Response

Applicant: Daniel J. Fisher

Serial No.: 10/821,071

Filed: April 8, 2004

Docket No.: M120.253.101 / 59554US002

Title: ATTACHMENT SYSTEM FOR A SANDING TOOL

problem that the applicant's invention addresses. *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988); *In re Wood*, 599 F.2d 1032, 1037, 202 USPQ 171, 174 (CCPA 1979). Two criteria are evaluated to determine whether a reference is analogous art: (1) whether the art is from the same field of endeavor as the applicant's invention or (2) whether the reference is reasonably pertinent to the particular problem with which the inventor is involved. *In re Deminski*, 796 F.2d at 442, 230 USPQ at 315.

A reference is reasonably pertinent if . . . it is one which, because of the matter with which it deals, logically would have commended itself to the inventor's attention in considering his problem . . . If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem . . . If is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it.

In re Clay, 966 F.2d at 658, 23 USPQ2d at 1060-61.

With regard to the first analogous art criterion, whether the art is from the same field of endeavor as the invention, Long relates to fastening systems for garments and other articles. More particularly, Long relates to interlocking mechanical-type fastening systems which can be employed with disposable articles, such as gowns, diapers, incontinence garments, and the like. *Long* at col. 1, ll. 4-8. In direct contrast, the present invention relates to sanding tools such as edge sanders or random orbit sanders and, more particularly, to an attachment system that allows an abrasive article to be easily attached to, or separated from, sanding tools. *Specification* at p. 1, ll. 7-9. Clearly, fastening systems for garments and the like are not within the same field of endeavor as sanding tools or attachment systems for sanding tools.

Any effort to argue that the Applicant's invention and Long both relate to some common, overly broad field of endeavor is improper. The possibility that a reference and an application relate to a common, broad industry does not render them within the same field of endeavor. The Federal Circuit has held that while storing liquid hydrocarbons and extracting crude petroleum are both in the "petroleum industry," the two types of endeavor are in separate, distinct fields. *See In re Clay* 966 F.2d at 658,

Amendment and Response

Applicant: Daniel J. Fisher

Serial No.: 10/821,071

Filed: April 8, 2004

Docket No.: M120.253.101 / 59554US002

Title: ATTACHMENT SYSTEM FOR A SANDING TOOL

23 USPQ2d at 1060-61 (Holding the storage of liquid hydrocarbons is in a different field of endeavor than extraction of crude petroleum, though both are in the “petroleum industry”).

In other words, even if the present invention and Long were considered to be in the same overly broad field, *e.g.*, fasteners, *In re Clay* indicates that there must be a closer relationship between the fields of endeavor under the analogous art standard. *Id.* Thus, Long’s field of endeavor relating to fasteners for garments and the like is not within the same field as attachment systems for sanding tools, such that the first criterion is not satisfied.

With regard to the second criterion, whether the reference is reasonably pertinent to the particular problem with which the inventor is involved, the present application is concerned with providing an attachment system that allows an abrasive article to be quickly and easily attached to, and removed from, a conversion pad used with a sander. In particular, problems addressed include limited gripping finger space between an abrasive article and an attachment surface of a conversion pad, as well as the fact that a sanding operation tends to cause attachment systems to mesh aggressively, making separation more difficult. Additionally, the present application identifies that it would also be desirable to provide a conversion pad that uniformly supports the entire surface area of the abrasive article, thereby providing a consistent and uniform abrasive surface for sanding a work surface. *E.g.*, *Specification* at p. 2, ll. 5-21. Clearly, such problems are particular to attachment systems for attaching abrasive articles to sanders and not otherwise related to garment fasteners.

For example, in direct contrast, Long desires to address problems of better maintaining desired garment fit, reducing sagging and drooping of crotch regions of garments, reducing rollover and drooping at waist regions of garments, creating resistance to premature pop-opens of garments, improving fit of garments, having greater comfort, reducing irritation, and having greater securement and reliability for wearers fastening and unfastening garments. *Long* at col. 2, ll. 5-14; col. 4, ll. 8-26. As

Amendment and Response

Applicant: Daniel J. Fisher

Serial No.: 10/821,071

Filed: April 8, 2004

Docket No.: M120.253.101 / 59554US002

Title: ATTACHMENT SYSTEM FOR A SANDING TOOL

described by Long, such garments include diapers, caps, gowns, shoe covers, feminine care articles, children's training pants, incontinence garments, and the like. *Long* at col. 3, ll. 38-44. Although Long mentions the desire for greater securement and reliability, such problems are clearly delineated in association with garments and couched in terms of problems particularly associated with garment fastening. As such, the problems addressed by Long are insufficiently related to the problems addressed by the Applicant.

For example, Long is entirely unconcerned with the problem of attaching an abrasive article to a conversion pad, including the aggressive nature of sanding, and a tendency for sanding operations to cause attachment systems to aggressively mate, making separation more difficult. Clearly, when faced with problems of attaching an abrasive article to a sander, one of ordinary skill in the art would be "directed to a different purpose" than that of Long. *In re Clay* 23 USPQ2d at 1060-61. The problems solved by Long (e.g., greater securement and reliability in securing garments) are not reasonably pertinent to the problems addressed by the present invention (e.g., attaching and removing an abrasive article from a conversion pad). *Long* at col. 4, ll. 8-26; col. 3, ll. 40-44.

In light of the forgoing clarifying remarks, Long fails to meet the first or second requirements of the analogous art standard. Just as the *In re Oetiker* court indicated, not all hooking problems are analogous. In particular, the *In re Oetiker* court held that not all hooking problems are analogous and that an inventor seeking to improve a hose clamp would not reasonably be expected or motivated to look to hooks used to fasten garments. See *In re Oetiker*, 24 USPQ2d at 1445-46. Similarly here, one having ordinary skill in the art would not reasonably be expected or motivated to look to the garment fasteners described in Long to provide improved attachment systems for easily attaching and separating abrasive articles to sanding tools. For at least such reasons, claims 8 and 9, as well as claim 1, should be allowable over the cited references.

Amendment and Response

Applicant: Daniel J. Fisher

Serial No.: 10/821,071

Filed: April 8, 2004

Docket No.: M120.253.101 / 59554US002

Title: ATTACHMENT SYSTEM FOR A SANDING TOOL

Claims 2-9, 14, and 15 depend, in some form, from claim 1. As such, those claims are believed patentably distinct from the cited references for at least the reasons presented in association with claim 1. Withdrawal of the rejection of claims 1-9, 14, and 15, allowance of those claims, and notice to that effect are respectfully requested.

Additionally, the dependent claims can be distinguished from the cited references for at least the exemplary reasons described below. For example, claim 14 relates, in part, to the attachment region and the non-attachment region of claim 1 being co-planar. For reference, the specification and figures of the application indicate at page 11, line 23,

[I]t may be desirable to build up the non-attachment region 22 so it has the same height as the attachment region 20, whereby the attachment region and the non-attachment region are essentially co-planar. As shown in FIGS. 6A and 6B, this can be accomplished by providing the non-attachment region 22 with a lip or ridge 36.

In direct contrast, neither Nagano nor Long teach or suggest such limitations. In particular, neither Nagano nor Long teach or suggest a first major surface of a conversion pad including an attachment region and a non-attachment region, wherein the attachment region and the non-attachment are co-planar as required by the limitations of claim 14. Thus, for at least such additional reasons, claim 14 should be deemed allowable.

Claim 28 relates, in part, to a conversion pad including a first major surface and a second major surface, the second major surface including an attachment surface and a non-attachment surface along at least a portion of an edge region of the second major surface. Clarifying remarks have already been presented as to how Nagano and Long, alone or in combination, fail to teach or suggest similar limitations present in claim 1. Thus, for at least the reasons described above in association with claim 1, claim 28 is patentable over the cited references.

Claims 29-34 depend, in some form, from claim 28. As such, those claims are believed patentably distinct from the cited references for at least the reasons presented

Amendment and Response

Applicant: Daniel J. Fisher

Serial No.: 10/821,071

Filed: April 8, 2004

Docket No.: M120.253.101 / 59554US002

Title: ATTACHMENT SYSTEM FOR A SANDING TOOL

in association with claim 28. Withdrawal of the rejection claims 28-34, allowance of those claims, and notice to that effect are respectfully requested.

Claim 37 relates, in part, to an abrading tool including a back-up pad, a conversion pad connected with the back-up pad, and an abrasive article connected with the conversion pad. The back-up pad, the conversion pad, and the abrasive article have substantially the same profile and have aligned outer edges. The conversion pad includes first and second opposed major surfaces. The second major surface including an attachment region and a non-attachment region along at least a portion of an edge region of the second surface. Clarifying remarks have already been presented as to how Nagano and Long, alone or in combination, fail to teach or suggest similar limitations present in claim 1. Thus, for at least the reasons described above in association with claim 1, claim 37 is patentable over the cited references.

Additionally, the claim 37 can be further distinguished from the cited references for at least the exemplary reasons described below. For example, with reference to FIGS. 1-3 of Nagano, it should be understood that Nagano fails to teach or suggest a back-up pad, a conversion pad, and an abrasive article having substantially the same profile and having aligned outer edges. In particular, with reference to the cross-sectional view of FIG. 2, Nagano clearly shows the disc member 20 being diametrically smaller than the annular portion 18. Furthermore, as previously described, although it is not conceded that hook sheet 14 of Nagano is a "conversion pad," regardless, the hook sheet 14 would be regarded by one of ordinary skill in the art as being diametrically smaller than the annular portion 18. Thus, claim 37 should be deemed allowable for at least such additional reasons.

Claim 38 depends from claim 37. As such, claim 38 is believed patentably distinct from the cited references for at least the reasons presented in association with claim 38. Withdrawal of the rejection of claims 37 and 38, allowance of those claims, and notice to that effect are respectfully requested.

Amendment and Response

Applicant: Daniel J. Fisher

Serial No.: 10/821,071

Filed: April 8, 2004

Docket No.: M120.253.101 / 59554US002

Title: ATTACHMENT SYSTEM FOR A SANDING TOOL

Newly presented claim 41 relates, in part, to the conversion pad of claim 37 being removably connected to the back-up pad. None of the cited references teach or suggest the limitations of claim 41. As such, it is respectfully requested that newly presented claim 41 be deemed allowable.

CONCLUSION

In view of the above, Applicant respectfully submits that claims 1-9, 14, 15, 28-34, 37, 38, and 41, as well claims 10-13 and 16 as withdrawn by the Examiner, are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections, allowance of those claims, and notice to that effect are respectfully requested.

Applicants hereby authorize the Commissioner for Patents to charge Deposit Account No. 50-0471 in the amount of **\$50.00** (to cover the fees as set forth under 37 C.F.R. 1.16(h)(i)).

Any inquiry regarding this Amendment and Response should be directed to either David B. Patchett at Telephone No. (651) 736-4713, Facsimile No. (651) 736-3833 or Timothy A. Czaja at Telephone No. (612) 573-2004, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

Amendment and Response

Applicant: Daniel J. Fisher

Serial No.: 10/821,071

Filed: April 8, 2004

Docket No.: M120.253.101 / 59554US002

Title: ATTACHMENT SYSTEM FOR A SANDING TOOL

3M Innovative Properties Company

P.O. Box 33427

St. Paul, MN 55133-3427

Respectfully submitted,

Daniel J. Fisher,

By his attorneys,

DICKE, BILLIG & CZAJA, PLLC

Fifth Street Towers, Suite 2250

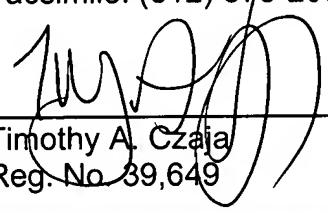
100 South Fifth Street

Minneapolis, MN 55402

Telephone: (612) 573-2004

Facsimile: (612) 573-2005

Date: April 11, 2006
TAC:jmc



Timothy A. Czaja
Reg. No. 39,649

CERTIFICATE UNDER 37 C.F.R. 1.8:

The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 11th day of April, 2006.

By: 

Name: Timothy A. Czaja